

Montana Fish,

Wildlife & Parks



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March 1, 1998

To:

Environmental Quality Council, Capital Building, Helena 59620

Directors Office, Dept. Of Health and Env. Sciences

Montana Dept. Fish, Wildlife and Parks

Resource Assessment

Fisheries Division

Regional Supervisors

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Fresno Chapter Walleyes Unlimited, PO Box 1501, Havre 59501

Terry Sanguins, President, Hi-Line Bassmasters, HC 67 Box 8, Turner 59542

Ladies and Gentlemen,

The enclosed Environmental Assessment (EA) has been prepared for sucker control at **Faber Reservoir, Blaine County** and is submitted for your consideration. Questions and comments will be accepted until March 31, 1998. Questions and comments will be accepted until March 31, 1998.

If you have any questions, please contact Bill Wiedenheft, Regional Fish Manager (228-3706) or Kent Gilge, Area Fisheries Biologist (265-6177). All comments may be directed to the undersigned at the above address.

Thank you for your interest.

Sincerely,

Kent Gilge
Area Fisheries Biologist

EFFECTS OF INTRODUCING WALLEYE AND SMALLMOUTH BASS INTO FABER RESERVOIR

History and background

Faber Reservoir is located 30 miles south of Chinook near the townsite of Cleveland. It has been stocked and managed by the DFWP for more than 30 years. The reservoir was designated a Fishing Access Site in 1986 with a 20 year easement agreement. The reservoir covers approximately 25 surface acres at full pool. Water is used for recreation, irrigation and stock water. Until suckers were illegally introduced in the late 1980's the reservoir provided some of the best trout fishing in Region Six.

Proposed action

The proposed action is to introduce walleye (Stizostedion vitreum) and/or smallmouth bass (Micropterus dolomieu) into Faber Reservoir, Blaine County.

Need for proposed action

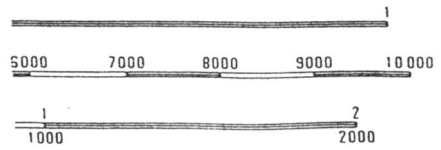
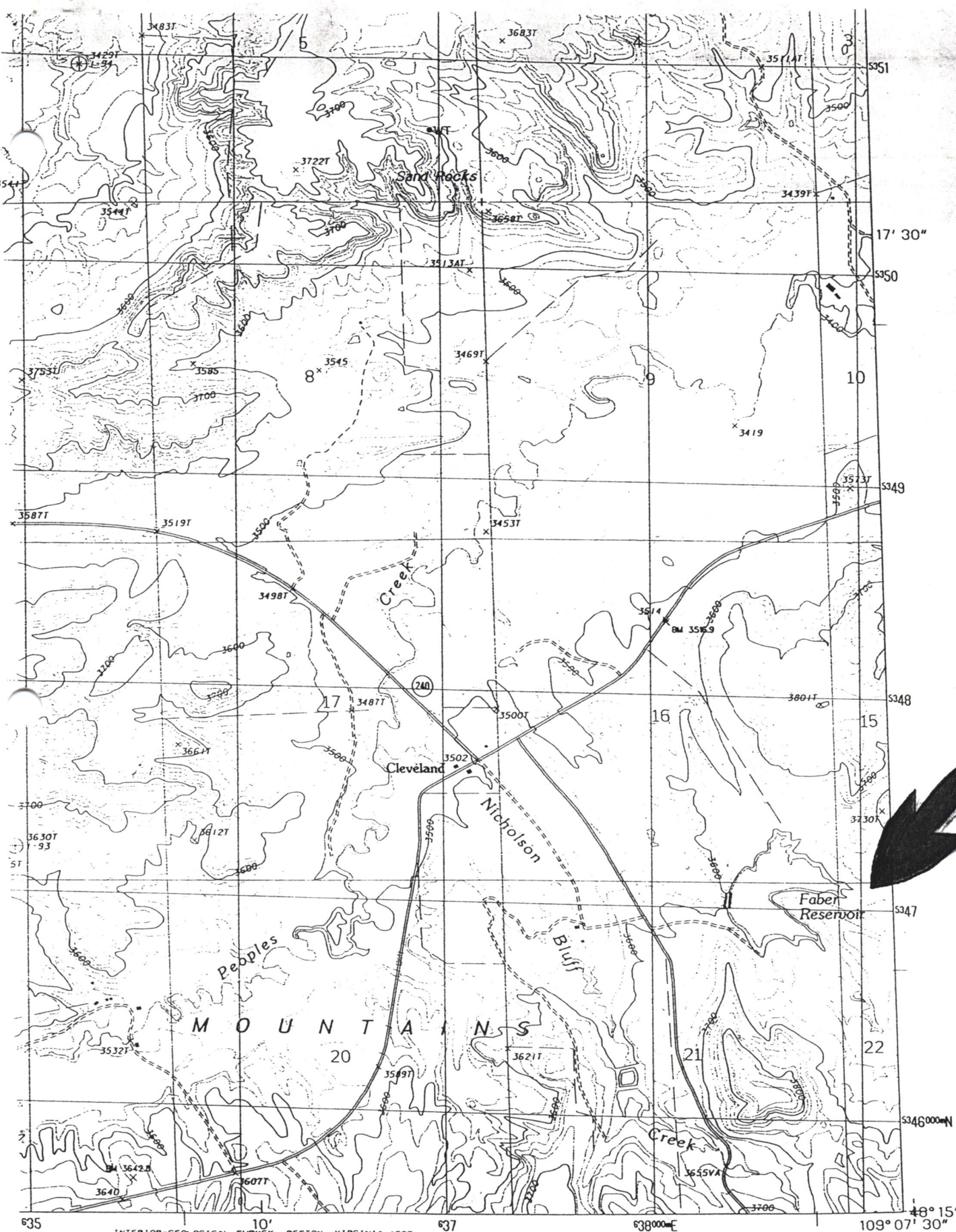
At the present time, trout stocked into Faber Reservoir exhibit poor survival. Consequently, the current management program is not satisfying the anglers who fish the reservoir. The reason for the reduction in the trout fishery is believed to be due to the presence of large numbers of white suckers (Catostomus commersoni) which compete for space and food. Suckers were illegally introduced into the reservoir around 1989. It is believed walleye and bass would prey on white suckers, thus reducing the white sucker population and improving the food supply for trout.

The objective of the proposed introduction is to return the trout fishery to pre-sucker introduction levels. Walleye and/or smallmouth bass should provide additional sport fish in the reservoir, thus diversifying available fishing opportunities. This would be a secondary benefit of the proposed introduction.

Description of the physical environment, fish populations and associated food organisms

Faber Reservoir (T29N,R20E,S21) See attached map.

The reservoir is located on an unnamed drainage of Peoples Creek near the town of Cleveland. It has been stocked and



ROAD LEGEND	
Improved Road	—————
Unimproved Road
Trail	- - - - -
Interstate Route	—————
U.S. Route
State Route	- - - - -

managed as a public trout fishery since 1966. It is approximately 25 surface acres with a maximum depth of 28 feet. The water is used for irrigation, stock water and recreation. One spring-fed drainage, approximately two miles in length, flows into the reservoir from the south. Bottom substrate in the reservoir consists of sand, mud and gravel. Fathead minnows, white suckers and rainbow trout comprise the only known fish species present at this time. Main fish food items consist of freshwater shrimp, zooplankton and aquatic insects.

Over-flow or released water from the dam flows approximately one mile down an unnamed drainage before reaching Peoples Creek. The confluence area is a transition zone in which Peoples Creek changes from a trout fishery to an intermittent prairie stream. The headwaters of Peoples Creek contain fair numbers of brook trout. The middle section or transition zone is dry to intermittent in most years. Downstream, fish survive in isolated pools during non-irrigation or runoff periods. Common species found in Peoples Creek include lake chub, fathead minnow, longnose dace, white sucker, longnose sucker, mountain sucker. Near its confluence with the Milk River, sauger, walleye, channel catfish, carp, smallmouth bass and northern pike can be found.

Other sucker control measures

Physical removal by trapping is impractical, costly and labor intensive and has not shown itself to be successful. This option has been tried at both Bear Paw Lake and Grasshopper Reservoir without success (Gilge, 1990).

The most accepted and successful method of eliminating suckers is chemical treatment using the fish toxicant rotenone. Rotenone has been successfully used for decades. Rotenone works best when the reservoir being treated can be drawn down to low levels and there is no fresh water inflow. Faber reservoir is used for irrigation. The reservoir owner is reluctant to release water reserves downstream when he cannot use the water. The feeder drainages contain pools and springs and the entire drainage would have to be treated to insure a total kill. Precipitation is less than 13 inches per year and is not likely the reservoir could be refilled for several years after a significant drawdown. It is anticipated that the fishery would be lost for three to five years after such an undertaking. Cost of the treatment is also a factor. Preliminary estimates of manpower and materials would cost at least \$3,000. If the preferred alternative fails to meet the objective, chemical treatment is still an option especially if it is timed with a natural drought cycle.

Potential for walleye and/or smallmouth bass to become established in Faber Reservoir or Peoples Creek and associated risks

Spawning and habitat suitability

Walleye would not be expected to reproduce in the reservoir as insufficient clean rock or gravel is present in which to lay eggs. If walleye do not reproduce they will have to be restocked periodically with hatchery fish. This situation offers the opportunity to tailor the number of predators to the sucker situation. A non-reproducing population provides the means for extirpation of the population i.e. cessation of stocking, should objectives not be met. Escapement downstream would put walleye into an area they currently have access to from the Milk River. Habitat limitations are severe and no population is likely to establish.

Smallmouth bass have some limited potential for reproduction in the reservoir. Lack of suitable habitat in the creek would preclude their establishment.

Competition and predation

Competition with trout may occur briefly in early life stages, but piscivory in walleye occurs early and no significant diet overlap is expected. Dietary overlap with smallmouth bass may be greater at certain times of the year and both species are capable of eating one another if forage supplies get low (Johnson and Hale, 1977). The purpose for this introduction is to improve trout fishing in Faber Reservoir. Therefore, it is important to determine if predation of trout by walleye might be significant. Walleye are not too particular about what kind of fish they eat. Walleye generally select the most available species of the appropriate size. As mentioned previously, monitoring of the populations would allow for adjustment of walleye numbers to achieve the desired level of predation. As walleye increase in size it may require stocking of larger trout. Walleye could also be trapped from the reservoir if larger fish were determined to be preying excessively on rainbows. Smallmouth bass would not be expected to prey significantly upon fingerling trout as long as sucker/minnow populations remained high. An adjustment in the stocking size of trout may have to be made years down the road.

Other predator fish considered

No other top predators such as northern pike or tiger musky were considered due to the high probability of significant trout loss due to predation.

Public comment on proposed action

Public meetings were held in the fall of 1996 regarding a statewide Warmwater Fisheries Plan. One item for discussion concerned the introduction of smallmouth bass and or walleye into Faber Reservoir. Public support in light of previous success at other waters was noted.

Persons preparing the EA:

This environmental assessment was prepared by Kent Gilge, a fisheries biologist for the Montana Department of Fish, Wildlife and Parks. Kent received a B.S. in Fish and Wildlife Management from Montana State University in 1975. He has worked intensively and extensively with the fisheries of Region 6 since 1977.

Date: December 16, 1997

SUMMARY AND CONCLUSIONS

A small introduction of walleye accompanied by a large introduction of smallmouth bass should inflict heavy predation on the growing sucker population. This action should reduce sucker numbers and therefore competition with trout. Trout growth and survival is expected to improve. It would also reduce or eliminate the large population of fathead minnows currently present. This reduction in small fish is expected to have an additional benefit by reducing visitations of fish-eating birds such as pelicans, gulls and cormorants. Recently, large numbers of these fish-eating birds have frequented the reservoir. Though they are presumed to be feeding primarily on rough fish, they certainly will take trout when available. They also are intermediate hosts for several parasites currently infesting trout in this reservoir. Faber Reservoir has one of the highest infection rates of black-spot disease in the area. *Ligula intestinalis* is also very common in the area. It is believed that the rough fish numbers are primarily responsible for the increase in fish eating birds and associated infection rates.

Walleye should not cause a significant reduction in the trout population unless large numbers of walleye over 16 inches are present and the sucker population has been severely reduced. Annual trapping and population studies conducted by the MDFWP would allow for removal and relocation of most walleye over 16 inches every spring. Anticipated increases in the growth rate of trout will also assist in reducing predation. Though walleye numbers will be kept purposely low, smallmouth bass should become present in fishable numbers and provide a considerable amount of sportfishing.

Case histories in which predatory fishes were used to successfully reduce sucker populations in trout reservoirs include Cooney Reservoir (Venditti, 1994), Beaver Creek Reservoir and Bear Paw Lake (Gilge, 1997).

No Action Alternative

If no action is taken, it is quite probable that fishermen who have been frustrated with this fishery will take things into their own hands as they have done in other reservoirs in the area. This frustration usually translates into bucket transfers of predator species that are readily available in the area, namely walleye and northern pike.

LITERATURE CITED

- Gilge, K. 1990. Northeast Montana Coldwater Ecosystem Investigations. Montana Department of Fish, Wildlife, and Parks. Job Progress Report, F-46-R-3.
- Gilge, K. 1997. Northeast Montana Coldwater Ecosystem Investigations. MDFWP. Job Prog. Rpt., F-78-R-3,V-d. 14pp.
- Johnson, F.H. and J.G. Hale. 1977. Interrelations between walleye and smallmouth bass in four northeastern Minnesota lakes, 1948-69. J.Fish.Res. Board Can. 34: 1626-1632.
- Venditti, D.A. 1994. Diet Overlap and Habitat Utilization of Rainbow Trout and Juvenile Walleye in Cooney Reservoir, Montana. M.S. Thesis, MSU. 84p.

PART II. ENVIRONMENTAL REVIEW

1. Evaluation of the Impacts of the Proposed Action Including Secondary and Cumulative Impacts on the Physical and Human Environment:

IMPACTS

PHYSICAL ENVIRONMENT

1. LAND RESOURCES

Will the proposed action result in:

a. Soil instability or changes in geologic substructure?

b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil which would reduce productivity or fertility?

c. Destruction, covering or modification of any unique geologic or physical features?

d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?

e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?

f. Other: _____

UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
	X				
	X				
	X				
	X				
	X				

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of n if needed):

IMPACTS

PHYSICAL ENVIRONMENT

2. AIR

Will the proposed action result in:

- a. Emission of air pollutants or deterioration of ambient air quality? (also see 13 (c))
- b. Creation of objectionable odors?
- c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?
- d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?
- e. Other: _____

UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
	X				
	X				
	X				
	X				

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Air Resources (Attach additional pages of narrative needed):

PHYSICAL ENVIRONMENT

IMPACTS

3. WATER

Will the proposed action result in:

- a. Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?
- b. Changes in drainage patterns or the rate and amount of surface runoff?
- c. Alteration of the course or magnitude of flood water or other flows?
- d. Changes in the amount of surface water in any water body or creation of a new water body?
- e. Exposure of people or property to water related hazards such as flooding?
- f. Changes in the quality of groundwater?
- g. Changes in the quantity of groundwater?
- h. Increase in risk of contamination of surface or groundwater?
- i. Effects on any existing water right or reservation?
- j. Effects on other water users as a result of any alteration in surface or groundwater quality?
- k. Effects on other users as a result of any alteration in surface or groundwater quantity?
- l. Other: _____

	IMPACTS				CAN IMPACTS BE MITIGATED*	COMMENT INDEX
	UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT		
		X				
		X				
		X				
		X				
		X				
		X				
		X				
		X				
		X				
		X				
		X				

include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Water Resources (Attach additional pages of narrative if needed):

PHYSICAL ENVIRONMENT

IMPACTS

	UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
<p>4. <u>VEGETATION</u></p> <p>Will the proposed action result in:</p> <p>a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?</p> <p>b. Alteration of a plant community?</p> <p>c. Adverse effects on any unique, rare, threatened, or endangered species?</p> <p>d. Reduction in acreage or productivity of any agricultural land?</p> <p>e. Establishment or spread of noxious weeds?</p> <p>f. Other: _____</p>		<p>X</p> <p>X</p> <p>X</p> <p>X</p> <p>X</p>				

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Vegetation Resources (Attach additional pages of narrative if needed):

PHYSICAL ENVIRONMENT

5. FISH/WILDLIFE

Will the proposed action result in:

a. Deterioration of critical fish or wildlife habitat?

b. Changes in the diversity or abundance of game animals or bird species?

c. Changes in the diversity or abundance of nongame species?

d. Introduction of new species into an area?

e. Creation of a barrier to the migration or movement of animals?

f. Adverse effects on any unique, rare, threatened, or endangered species?

g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?

h. Other: _____

	IMPACTS			CAN IMPACTS BE MITIGATED*	COMMENT INDEX
	UNKNOWN*	NO IMPACTS	IMPACTS: MINOR POTENTIALLY SIGNIFICANT		
		X	X	yes	} see EA document
			X	yes	
			X	yes	
		X			
		X			

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Fish/Wildlife Resources (Attach additional pages c narrative if needed):

HUMAN ENVIRONMENT

6. NOISE/ELECTRICAL EFFECTS

Will the proposed action result in:

- a. Increases in existing noise levels?
- b. Exposure of people to serve or nuisance noise levels?
- c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?
- d. Interference with radio or television reception and operation?
- e. Other: _____

	IMPACTS				COMMENT INDEX
	UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	
		X			
		X			
		X			
		X			

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Noise/Electrical Effects (Attach additional pages of narrative if needed):

HUMAN ENVIRONMENT

IMPACTS

7. LAND USE

Will the proposed action result in:

a. Alteration of or interference with the productivity or profitability of the existing land use of an area?

b. Conflicted with a designated natural area or area of unusual scientific or educational importance?

c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?

d. Adverse effects on or relocation of residences?

e. Other: _____

UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
	X				
	X				
	X				
	X				

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Use (Attach additional pages of narrative if needed):

HUMAN ENVIRONMENT

IMPACTS

3. RISK/HEALTH
HAZARDS

Will the proposed action
result in:

a. Risk of an explosion or
release of hazardous
substances (including, but
not limited to oil,
pesticides, chemicals, or
radiation) in the event of
an accident or other forms
of disruption?

b. Affect an existing
emergency response or
emergency evacuation
plan or create a need for a
new plan?

c. Creation of any human
health hazard or potential
hazard?

d. Other: _____

UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
	X				
	X				
	X				

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Risk/Health Hazards (Attach additional pages of narrative if needed):

HUMAN ENVIRONMENT

3. COMMUNITY IMPACTS

Will the proposed action result in:

- a. Alteration of the location, distribution, density, or growth rate of the human population of an area?
- b. Alteration of the social structure of a community?
- c. Alteration of the level or distribution of employment or community or personal income?
- d. Changes in industrial or commercial activity?
- e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?
- f. Other: _____

IMPACTS

UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
	X				
	X				
	X				
	X				
	X				

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Community Impacts (Attach additional pages of narrative if needed):

IMPACTS

HUMAN ENVIRONMENT

10. PUBLIC SERVICES/
TAXES/UTILITIES

Will the proposed action result in:

a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify: _____

b. Will the proposed action have an effect upon the local or state tax base and revenues?

c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?

d. Will the proposed action result in increased use of any energy source?

e. Other: _____

UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
	X				
	X				
	X				
	X				

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Public Services/Taxes/Utilities (Attach additional pages of narrative if needed):

HUMAN ENVIRONMENT

11. AESTHETICS/RECREATION

Will the proposed action result in:

a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?

b. Alteration of the aesthetic character of a community or neighborhood?

c. Alteration of the quality or quantity of recreational opportunities and settings?

d. Other: _____

	IMPACTS				COMMENT INDEX
	UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	
		X			
		X			
			X		Fishing should improve

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Aesthetics/Recreation (Attach additional pages of narrative if needed):

IMPACTS

HUMAN ENVIRONMENT

12. CULTURAL/
HISTORICAL
RESOURCES

Will the proposed action result in:

a. Destruction or alteration of any site, structure or object of prehistoric, historic, or paleontological importance?

b. Physical change that would affect unique cultural values?

c. Effects on existing religious or sacred uses of a site or area?

d. Other: _____

UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED*	COMMENT INDEX
	X				
	X				
	X				

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Cultural/Historical Resources (Attach additional pages of narrative if needed):

SIGNIFICANCE CRITERIA

13. SUMMARY
EVALUATION OF
SIGNIFICANCE

Will the proposed action,
considered as a whole:

a. Have impacts that are
individually limited, but
cumulatively considerable?
(A project or program may
result in impacts on two
or more separate
resources which create a
significant effect when
considered together or in
total.)

b. Involve potential risks
or adverse effects which
are uncertain but
extremely hazardous if
they were to occur?

c. Potentially conflict with
the substantive
requirements of any local,
state, or federal law,
regulation, standard or
formal plan?

d. Establish a precedent or
likelihood that future
actions with significant
environmental impacts will
be proposed?

e. Generate substantial
debate or controversy
about the nature of the
impacts that would be
created?

d. Other: _____

SIGNIFICANCE CRITERIA	IMPACTS				COMMENT INDEX
	UNKNOWN*	NO IMPACTS	IMPACTS: MINOR	POTENTIALLY SIGNIFICANT	
13. SUMMARY EVALUATION OF SIGNIFICANCE					
Will the proposed action, considered as a whole:					
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources which create a significant effect when considered together or in total.)		X			
b. Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?		X			
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		X			
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X			
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		X			
d. Other: _____					

*Include an attachment with a narrative explanation describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or can not be evaluated.